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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,478	10/03/2005	Bengt Sahlgren	0104-0500PUS1	5522
2292 7590 04/16/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER RADKOWSKI, PETER				
ART UNIT 2883		PAPER NUMBER		
NOTIFICATION DATE 04/16/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

### Office Action Summary

**Application No.**

10/520,478

**Applicant(s)**

SAHLGREN ET AL.

**Examiner**

PETER RADKOWSKI

**Art Unit**

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 2-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### **Detailed Office Action**

#### **Response to Applicant's Arguments**

1. Applicants' arguments filed January 21, 2009 have been fully considered but they are not persuasive.

Regarding claims 1 and 4-10, applicant argues that Kim (6,640,024; "Kim") in view of Facq (5,307,437; "Facq") neither discloses nor suggest a wavelength-selective optical switch with a first waveguide and a second waveguide having "a deflector provided in each of said first and second optical waveguide," each deflector comprising a blazed Bragg grating, and both deflectors disposed such that the "first tilted deflector" is superimposed upon the "second tilted deflector." Remarks, p. 5, l. 16 – p. 6, l. 7. However, Kim teaches a wavelength-selective optical switch [300] comprising first [280] and second [290] optical waveguide fibers with tilt blazed gratings [310] on a dual core section, (See Kim, fig. 7; col. 2, ll. 23-42); while Facq teaches an optical switch [30] comprising two tilt blazed gratings waveguides [20] and [21] and an external resonator [28]. (See Facq, fig. 4; col. 5, ll. 9-11) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kim to have the external resonator taught by Facq because the resultant switch configuration would exhibit enhanced coupling between light paths. (See Facq, col. 5, ll. 26-34)

#### **Claim Rejections - 35 USC § 103**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

#### **Claims 1 and 4-10**

3. Claims 1 and 4-10 are rejected under 35 U.S.C. 103(a) as being obvious over Kim (6,640,024; "Kim") in view of Facq (5,307,437; "Facq").

Regarding Claims 1 and 4-10, Kim teaches a wavelength-selective optical switch [300] comprising first [280] and second [290] optical waveguide fibers with tilt blazed gratings [310] on a dual core section. (See Kim, fig. 7; col. 2, ll. 23-42).

Further regarding Claims 1 and 4-10, Kim does not explicitly teach an external resonator system. However, Facq teaches an optical switch [30] comprising two tilt blazed gratings waveguides [20] and [21] and an external resonator [28]. (see Facq, fig. 4; col. 5, ll. 9-11) Since Kim and Facq both teach tilt blazed gratings, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kim to have the external resonator taught by Facq because the resultant configuration would exhibit enhanced flux coupling. (See Facq, col.

5, ll. 26-34) One would have been motivated to make this modification because improved flux coupling switches facilitate the design of optical sensors.

Regarding Claim 10, Facq teaches a blazed grating system with titled blazed gratings [44] and [45] aligned at ninety degrees. (See Facq, fig. 5) Since Kim and Facq both teach tilt blazed gratings, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kim to have the external resonator taught by Facq because the resultant configuration would exhibit enhanced flux coupling. (See Facq, col. 5, ll. 26-34) One would have been motivated to make this modification because improved flux coupling switches facilitate the design of optical sensors.

### **Conclusion**

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to Form 892 for additional references cited but not used in this office action.
5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Radkowski whose telephone number is (571) 270-1613. The examiner can normally be reached on Monday - Thursday, 8 AM to 5 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font, can be reached on (517) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, See <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.

/Peter Radkowski/  
Patent Examiner, Art Unit 2883

/James P. Hughes/  
Primary Examiner, Art Unit 2883